

# START

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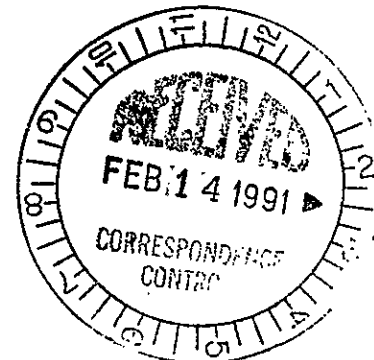


## Department of Energy

Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

91-PPB-360

FEB 08 1991



Mr. R. S. Burd, Director  
Water Division  
U.S. Environmental Protection Agency  
1200 Sixth Avenue, Mail Stop WD-131  
Seattle, Washington 98101

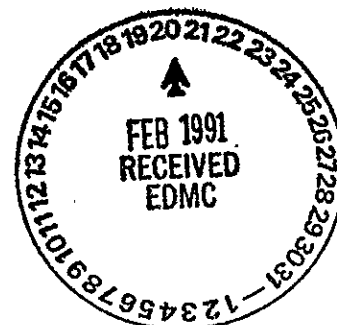
Dear Mr. Burd:

### HANFORD SITE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT MODIFICATION REQUEST

Enclosed for your review and action are U.S. Environmental Protection Agency (EPA) General Information Form 1, "Consolidated Permits Program," and EPA National Pollutant Discharge Elimination System (NPDES) Permit Forms 2C and 2D. This enclosure serves as a request for modification to the Hanford Site NPDES Permit Number WA-000374-3. The permit modification is being requested to allow for the operation of a new source outfall to the Columbia River. This outfall will serve the 300 Area Filter Plant (315 Building).

The 300 Area Filter Plant processes approximately 2 to 3.5 million gallons of water per day from the Columbia River for use in the 300 Area sanitary and fire distribution systems. Currently, filter backwash from the water treatment system is discharged to unlined ponds. These ponds utilize the soil column to filter sediment from the backwash as the water percolates downward. This project proposes to replace the unlined ponds with a lined sedimentation basin. The clear water decanted from the lined sedimentation basin would be discharged to the Columbia River via the proposed new outfall.

In accordance with an understanding reached between the Westinghouse Hanford Company and the EPA on September 5, 1990, it is noted that a topographical map has not been provided in response to Item XI of General Information Form 1. This map is currently being developed and will follow in approximately two months. It was also understood the EPA will begin review of the attached submittal before receipt of the topographical map, so that permit modification approval might not become a critical path for operation of the new discharge.



Mr. R. S. Burd

-2-

91-PPB-360

FEB 08 1991

Should you have any questions regarding the above subject matter or the enclosed material, please contact Mr. R. G. Holt of my staff on (509) 376-9989.

Sincerely,



R. D. Izatt, Director  
Environmental Restoration Division

ERD:RGH

Enclosure:  
NPDES Permit Modification Request

cc w/encl:  
P. T. Day, EPA  
R. E. Lerch, WHC, w/o encl.

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9056597

ENCLOSURE

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## New Sources and New Dischargers Application for Permit to Discharge Process Wastewater

For each outfall, list the latitude and longitude, and the name of the receiving water.

[illegible]

8. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item III-A. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

C. Except for storm runoff, leaks, or spills, will any of the discharges described in item III-A be intermittent or seasonal?

☐ Yes (complete the following table)

☒ No (go to item IV)

Outfall Number	1. Frequency		2. Flow		
	a. Days Per Week (specify average)	b. Months Per Year (specify average)	a. Maximum Daily Flow Rate (in mgd)	b. Maximum Total Volume (specify with units)	c. Duration (in days)

#### IV. Production

If there is an applicable production-based effluent guideline or NSPS, for each outfall list the estimated level of production (projection of actual production level, not design), expressed in the terms and units used in the applicable effluent guideline or NSPS, for each of the first 3 years of operation. If production is likely to vary, you may also submit alternative estimates (attach a separate sheet).

Year	a. Quantity Per Day	b. Units of Measure	c. Operation, Product, Material, etc (specify)
		N/A	

\_\_\_\_\_

**General Instructions (See table 2D-2 for Pollutants)**

### 1. Pollutant

**3. Average  
Daily  
Value**  
*(include units)*

**4. Source (see instructions)**

Less than  
1.5 ppm

N/A

Less than  
5 ppm

N/A

The data in this section was taken from:  
Jungfleisch, F., 1988, "Preliminary Evaluation of Hanford Liquid Discharges to Ground," WHC-EP-0052, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

2.8 ppm

N/A

2 ppm

N/A

Less than  
0.1 ppm

N/A

8°C

N/A

20°C

N/A

## 7.9

## 7.6

Minimum daily value of 7.4

WA-000374-3

- C. Use the space below to list any of the pollutants listed in Table 2D-3 of the instructions which you know or have reason to believe will be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it will be present.

1. Pollutant

2. Reason for Discharge

N/A

## VI. Engineering Report on Wastewater Treatment

- A. If there is any technical evaluation concerning your wastewater treatment, including engineering reports or pilot plant studies, check the appropriate box below.

☒ Report Available☐ No Report

- B. Provide the name and location of any existing plant(s) which, to the best of your knowledge, resembles this production facility with respect to production processes, wastewater constituents, or wastewater treatments.

Name

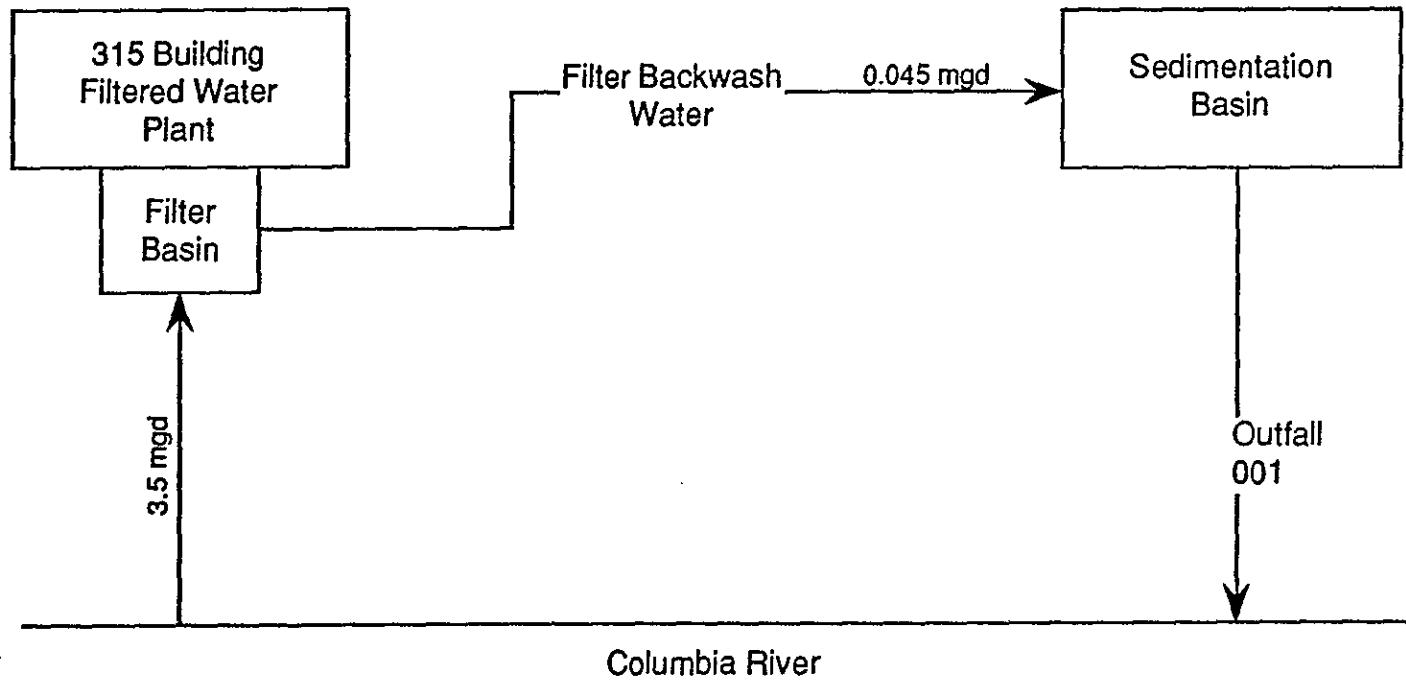
Location

Clearwells Filter  
Backwash (Outfall 004  
as permitted by  
WA-000374-3)

100K Area, Hanford Site

Attachment B

# 300 AREA FILTER PLANT BACKWASH





VII. Other Information (Optional)

Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations for the proposed facility. Attach additional sheets if necessary.

It is noted that this proposed outfall is similar to outfall 004, effluent limitations for which are described on page 4 of NPDES Permit WA-000374-3.

VIII. Certification

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

A. Name and Official Title (type or print)	B. Phone No.
C. Signature	D. Date Signed

U.S. ENVIRONMENTAL PROTECTION AGENCY  
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER  
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS  
*Consolidated Permits Program*

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

## II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

OFFICIAL USE ONLY (effluent guidelines sub categories)

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (complete the following table)

☒ NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW					
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		b. TOTAL VOLUME (specify with units)		c. DUR- ATION (in days)	
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY		
	N/A								

### III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (complete Item III-B)

☒ NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III-C)

☒ NO (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	
		N/A	

### IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of waste-water treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (complete the following table)

☒ NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED
N/A					

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

CONTINUED FROM PAGE 2

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## V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding — Complete one set of tables for each outfall — Annotate the outfall number in the space provided.  
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
N/A			

## VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (list all such pollutants below)☒ NO (go to Item VI-B)

**VII. BIOLOGICAL TOXICITY TESTING DATA**

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (Identify the test(s) and describe their purposes below)

☒ NO (go to Section VIII)

N/A

**VIII. CONTRACT ANALYSIS INFORMATION**

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☐ YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

☒ NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
N/A			

**IX. CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print)

B. PHONE NO. (area code & no.)

C. SIGNATURE

D. DATE SIGNED

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)

WA-000374-3

Form Approved  
OMB No. 2040-0086  
Approval expires 7-31-88

# V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

1

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	<1.5	<255,487.5					1	ppm	mg			
b. Chemical Oxygen Demand (COD)	<5	<851,625					1	ppm	mg			
c. Total Organic Carbon (TOC)	2.8	476,910					1	ppm	mg			
d. Total Suspended Solids (TSS)	2	340,650					36	ppm	mg			
e. Ammonia (as N)	<0.1	<17,032.5					1	ppm	mg			
f. Flow	VALUE 45,000 gallons		VALUE		VALUE		1			VALUE		
g. Temperature (winter)	VALUE 8°C		VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE 20°C		VALUE		VALUE		1	°C		VALUE		
i. pH	MINIMUM 7.4	MAXIMUM 7.9	MINIMUM	MAXIMUM			24	STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)		X												

## ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	3. BELIEVED PRE-SENT	4. BELIEVED AS-SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	3. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		X												
l. Sulfide (as S)		X												
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

WA-000374-3

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Form Approved  
GME No. 2040-0086  
Approval expires 7-31-88

CONTINUED FROM PAGE 3 OF FORM 2-C

**PART C -** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST ING RE- QUIR- ED	b. BE- LIEVED PRE- SENT	c. BE- LIEVED AB- SENT	B. MAXIMUM DAILY VALUE		D. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVG. VALUE (if available)		d. NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	B. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)			X												
3M. Beryllium, Total, 7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)			X												
5M. Chromium, Total (7440-47-3)			X												
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)			X												
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
<b>DIOXIN</b>															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											



CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIR- ED	b. BE- LIEVED PRE- SENT	c. BE- LIEVED SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (Chloro- methyl) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodi- bromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloro- ethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichloro- bromomethane (75-27-4)			X												
13V. Dichloro- difluoromethane (75-71-8)			X												
14V. 1,1-Dichloro- ethane (75-34-3)			X												
15V. 1,2-Dichloro- ethane (107-06-2)			X												
16V. 1,1-Dichloro- ethylene (75-35-4)			X												
17V. 1,2-Dichloro- propane (78-87-5)			X												
18V. 1,3-Dichloro- propylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIR- ED	b. BE- LIEVED PRE- SENT	c. BE- LIEVED AB- SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO OF ANAL- YSES	e. CONCEN- TRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetra- chloroethane (78-34-5)			X												
24V. Tetrachloro- ethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans- Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Tri- chloroethane (71-55-6)			X												
28V. 1,1,2-Tri- chloroethane (79-00-5)			X												
29V. Trichloro- ethylene (79-01-6)			X												
30V. Trichloro- fluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chloropheno (95-57-8)			X												
2A. 2,4-Dichloro- phenol (120-83-2)			X												
3A. 2,4-Dimethyl- phenol (105-67-9)			X												
4A. 4,6-Dinitro-O- Cresol (534-52-1)			X												
5A. 2,4-Dinitro- phenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M- Cresol (59-50-7)			X												
9A. Pentachloro- phenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Tri- chlorophenol (88-06-2)			X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. MAXIMUM DAILY VALUE		d. MAXIMUM 30 DAY VALUE (if available)		e. LONG TERM AVRG. VALUE (if available)			a. CONCENTRATION	b. MASS	b. LONG TERM AVERAGE VALUE		b. NO. ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphthylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (a) Anthracene (56-55-3)			X												
6B. Benzo (a) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (ghi) Perylene (191-24-2)			X												
9B. Benzo (k) Fluoranthene (207-08-9)			X												
10B. Bis (2-Chloroethoxy) Methane (111-91-1)			X												
11B. Bis (2-Chloroethyl) Ether (111-44-4)			X												
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)			X												
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-38-7)			X												
16B. 2-Chloronaphthalene (91-58-7)			X												
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (a,h) Anthracene (53-70-3)			X												
20B. 1,2-Dichlorobenzene (95-50-1)			X												
21B. 1,3-Dichlorobenzene (541-73-1)			X												

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST ING RE- QUIR- ED	b. BEL- IEVED PUL- SENT	c. BEL- IEVED PUL- SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL- YSES	a. CON- CENTR- ATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
				(1) CON- CENTRATION	(2) MASS	(1) CON- CENTRATION	(2) MASS	(1) CON- CENTRATION	(2) MASS				(1) CON- CENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichloro- benzene (106-46-7)			X												
23B. 3,3'-Dichloro- benzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131-11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitro- toluene (121-14-2)			X												
28B. 2,6-Dinitro- toluene (605-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenyl- hydrazine (as Azo- benzene) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexa- chlorobutadiene (87-68-3)			X												
35B. Hexachloro- cyclopentadiene (77-47-4)			X												
36B. Hexachloro- ethane (67-72-1)			X												
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitro- sodimethylamine (62-75-9)			X												
42B. N-Nitrosodi- N-Propylamine (621-64-7)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST INC. RE- QUIR- ED	b. RE- VIEWED PRE- SENT	c. RE- LIEVED AB- SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL- YSES	a. CONCENT- RATION	b. MASS	3. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitro- sodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4- Tri- chlorobenzene (120-82-1)			X												
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. $\alpha$ -BHC (319-84-6)			X												
3P. $\beta$ -BHC (319-85-7)			X												
4P. $\gamma$ -BHC (58-89-9)			X												
5P. $\delta$ -BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. $\alpha$ -Endosulfan (115-29-7)			X												
12P. $\beta$ -Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

9 1 1 2 1 3 0 3 2

EPA I.D. NUMBER (copy from Item 1 of Form 1) OUTFALL NUMBER

WA-000374-3

1

Form Approved.  
OMB No. 2040-0086  
Approval expires 7-31-88

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST ING RE- QUIR- ED	B. DE- LIEVED PRE- SENT	C. DE- LIEVED AB- SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	e. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION -- PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

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<b>FORM 1</b> <b>GENERAL</b>		<b>EPA</b>		<b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b> <b>GENERAL INFORMATION</b> <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>		<b>I. EPA I.D. NUMBER</b> WA-000374-3			
<b>LABEL ITEMS</b>		<b>PLEASE PLACE LABEL IN THIS SPACE</b>		<b>GENERAL INSTRUCTIONS</b>					
I. EPA I.D. NUMBER				<p>If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.</p>					
III. FACILITY NAME									
V. FACILITY MAILING ADDRESS									
VI. FACILITY LOCATION									
<b>II. POLLUTANT CHARACTERISTICS</b>									
<p><b>INSTRUCTIONS:</b> Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.</p>									
<b>SPECIFIC QUESTIONS</b>		<b>MARK 'X'</b>		<b>SPECIFIC QUESTIONS</b>		<b>MARK 'X'</b>			
		YES	NO	FORM ATTACHED			YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)			X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)			X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)			X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X		
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)			X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)			X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)			X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)			X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			X	
<b>III. NAME OF FACILITY</b>									
1 SKIP U.S. Department of Energy-Richland Operations Office									
<b>IV. FACILITY CONTACT</b>									
<b>A. NAME &amp; TITLE (last, first, &amp; title)</b>		<b>B. PHONE (area code &amp; no.)</b>							
2 Izatt, R. D., Director - Environmental Restoration Div.		509 376 5441							
<b>V. FACILITY MAILING ADDRESS</b>									
<b>A. STREET OR P.O. BOX</b>									
3 P.O. Box 550									
<b>B. CITY OR TOWN</b>		<b>C. STATE</b>		<b>D. ZIP CODE</b>					
4 Richland,		WA		99352					
<b>VI. FACILITY LOCATION</b>									
<b>A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER</b>									
5 Hanford Site									
<b>B. COUNTY NAME</b>									
Benton									
<b>C. CITY OR TOWN</b>		<b>D. STATE</b>		<b>E. ZIP CODE</b>		<b>F. COUNTY CODE (if known)</b>			
6 Richland		WA		99352					

CONTINUED FROM THE FRONT

## VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	4	9	4	(specify)	Water Supply Treatment Plant	7	(specify)
15	16	17	18		Serving Federal Facilities	15	16
C. THIRD				D. FOURTH			
7	(specify)	7	(specify)				
15	16	17	18	15	16	17	18

## VIII. OPERATOR INFORMATION

A. NAME										B. Is the name listed in Item VIII-A also the owner?					
8	U.S. Department of Energy-Richland Operations									<input checked="" type="checkbox"/>	YES	<input type="checkbox"/>	NO		
15	16									66					
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)										D. PHONE (area code & no.)					
F = FEDERAL      M = PUBLIC (other than federal or state) S = STATE        O = OTHER (specify)										A      509      376      5441					
E. STREET OR P.O. BOX															
P.O. Box 550															
F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND	
B      Richland										WA		99352		Is the facility located on Indian lands?	
														<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
														52	

## X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)				D. PSD (Air Emissions from Proposed Sources)				IX. INDIAN LAND			
9	N	WA-000374-3		9	P	PSD-X80-14		An existing permit for the Hanford Site.			
15	16	17	18	15	16	17	18				
B. UIC (Underground Injection of Fluids)				E. OTHER (specify)				(specify) State of Washington			
9	U	None		9		FF-01		Radioactive Air Emissions Permit			
15	16	17	18	15	16	17	18				
C. RCRA (Hazardous Wastes)				E. OTHER (specify)				(specify)			
9	R	WA7890008967		9							
15	16	17	18	15	16	17	18				

## XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

## XII. NATURE OF BUSINESS (provide a brief description)

Please see Attachment A.

## XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
R.D. Izatt, Director Environmental Restoration Division		

## COMMENTS FOR OFFICIAL USE ONLY

C



## ATTACHMENT A (NATURE OF BUSINESS)

The 300 Area Filter Plant (315 Building) processes approximately 2 to 3.5 million gallons of water per day from the Columbia River for use in the 300 Area sanitary and fire systems.

Alum is added to the influent water stream as a flocculent. The water flows into settling ponds and then to filters consisting of sand and anthracite coal. Seperan, a drinking water compatible filter aid, is added when turbidity is very high to assist the filtration. The alum, Seperan and other materials from the river which do not settle in the ponds are entrained in the filters.

When the pressure drops across the filters, or when the outlet turbidity approaches an operational limit, water is backflushed through the filters to remove entrained material. This backflush water, containing the alum and other materials from the filter media, comprises the filter backwash. Filter plant backwash flows are 2,000 gpm for a total of 14,000 to 20,000 gallons per backwash. Weekly totals vary due to river turbidity from 140,000 gallons per week (one backwash per day) to 980,000 gallons per week (7 backwashes per day). An estimated yearly total is 16,294,000 gallons.

Currently, the filter backwash is discharged to unlined ponds. These ponds utilize the soil column to filter the sediment as the water percolates downward. This project proposes to replace the unlined ponds with a lined permanent sedimentation pond. The clear water from this lined sedimentation pond would then be discharged to the Columbia River.

9112113035

# DISTRIBUTION COVERSHEET

<b>Author</b> JJ Luke/RD Izatt/RE Lerch		<b>Addressee</b> R. S. Burd, EPA		<b>Correspondence No.</b> Incoming:9100736	
<b>Subject</b> HANFORD SITE NATIONAL POLLUTANT DICHARGE ELIMINATION SYSTEM PERMIT MODIFICATION REQUEST					
<b>Internal Distribution</b>					
<b>Approval</b>	<b>Date</b>	<b>Name</b>	<b>Location</b>	<b>w/att</b>	
		<b>Correspondence Control</b>			
		R. J. Bliss L. E. Borneman L. C. Brown G. D. Carpenter C. M. Cox P. J. Davis J. L. Deichman L. P. Diediker T. N. Draper G. W. Duffield C. J. Geier E. M. Greager K. D. Hayden D. P. Hughes R. E. Lerch (Assignee) R. A. Lujan J. J. Luke D. L. Pursley D. R. Speer D. P. Trott G. W. Van Sickle T. C. Varljen B. D. Williamson EDMC JJL/LB	B3-04 H4-57 H4-51 B2-16 B3-65 B2-12 B1-52 T1-30 L6-54 L6-60 H4-57 L6-60 B4-62 N1-05 B2-35 N1-22 H4-57 N1-05 R2-77 H4-15 R1-15 B3-65 B3-15 H4-22 H4-57		
		Attachment same as Letter #9056597			
		